

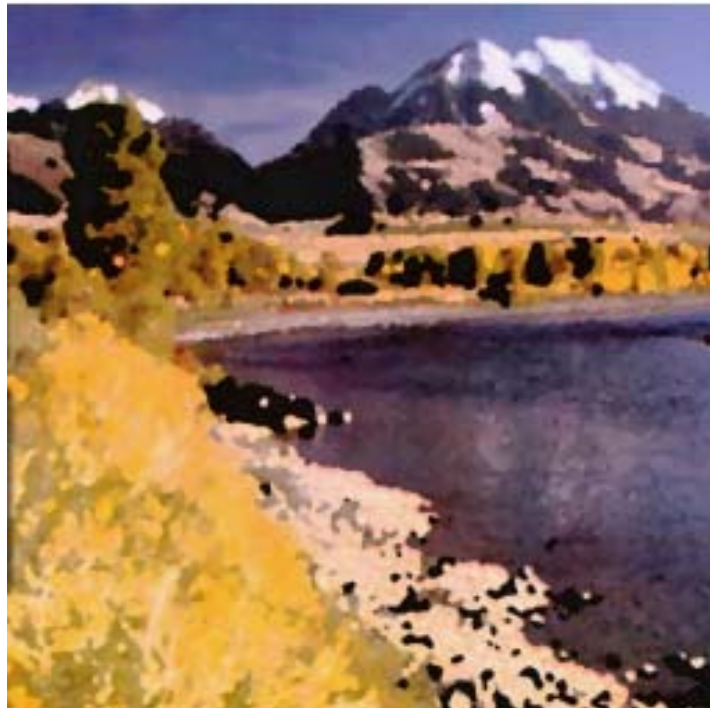
Inventory of Important Biological Resources for the Upper Yellowstone River Watershed

US EPA Region VIII
(8EPR-EP)
999 18th Street, Suite 500
Denver, CO 80202-2466

EPA Ecosystem Protection Grant MM998580-01
Regional Geographic Initiative Grant MM998580-02

© 2001 Montana Natural Heritage Program

State Library Building • P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • 406-444-3009



Emigrant Peak, Yellowstone River
watercolor by Jim Dushin

This document should be cited as follows:

Jean, C., and S. Crispin. 2001. Inventory of Important Biological Resources in the Upper Yellowstone River Watershed. Report to the Environmental Protection Agency. Montana Natural Heritage Program, Helena Montana. 26 pp. plus appendices.

For more information contact:

Montana Natural Heritage Program
1515 6th Ave.
PO Box 201800
Helena, MT 59620-1800
Telephone: (406) 444-3009
Email: mtnhp@state.mt.us
Web: <http://nris.state.mt.us/mtnhp/>

Wyoming Natural Diversity Database
University of Wyoming
P.O. Box 3381
Laramie, WY 82071-3381
Telephone: (307) 766-3023
Email: wndd@uwyo.edu
Web: <http://uwadmnweb.uwyo.edu/wyndd/>

Executive Summary

The purpose of this project was to assemble and improve the quality and accessibility of basic information about key biological resources in the Upper Yellowstone Watershed. The watershed was defined as the headwaters of the Yellowstone River extending downstream to the junction of the Yellowstone River with the Big Horn River in Yellowstone County, Montana. The Clark's Fork drainage and the headwaters of the Yellowstone River extend into Wyoming.

From the Montana and Wyoming natural heritage databases, we assembled a consolidated dataset of occurrence records for plant and animal species of concern and high quality natural communities in the watershed. All of the species and natural communities identified in this report, both familiar and obscure, contribute to the biological diversity and significance of the Upper Yellowstone watershed. Some have declined greatly and/or are in recovery. Some are unique to the watershed or the immediate vicinity, others are associated with distinctive habitats that are rare or restricted in distribution; all are potentially at risk from habitat modification and human disturbances. Timely knowledge about where these species and communities occur can provide opportunities for governments and citizens to make informed decisions about the future of the Upper Yellowstone watershed.

The species and community records assembled from the natural heritage programs were used to identify 79 sites of biological importance. These sites support imperiled or rare plants and animals, valuable wetland ecosystems or high quality natural communities, often of relatively restricted or declining types. The sites are concentrated on public lands managed by the National Park Service, Bureau of Land Management and the US Forest Service. In Wyoming, these sites lie entirely on public land. In Montana, most of the sites have a core area on federal or state land but may also include private property; a few sites are largely on private property.

For each site identified, we completed a site description that highlights its biological resource values. An ArcExplorer project on CD-ROM, presents the assembled species, including commu-

nity and site information in a series of GIS maps and associated data tables. This will provide planners and managers with desktop access to information on species of concern and high quality natural communities by watershed and at identified significant sites. The information can be used to help determine if planned activities might impact species of concern or sensitive ecological areas. When more precise or comprehensive information is needed, planners can contact the state heritage programs.

This project highlighted the absence of biological inventory data for many areas in the watershed, and the absence of information for any given area cannot be interpreted to indicate the absence of important species or communities. Nor can this dataset substitute for on-site surveys, which may be required for environmental assessments. Further biological inventory work focusing on the Great Plains and other "data gaps," will be essential to provide reliable data for planning and resource management. High priorities for survey include prairie fishes (some of which are federally listed or candidates), riparian corridors and wetlands, woody draws, and major intact grasslands – especially in the Northern Glaciated Plains (north of the Missouri River in northeastern Montana).

This project also highlighted the need for heritage programs to provide more direct support and assistance to local governments and planners. This should involve clearly identifying the specific needs of local planners, and developing data formats and interactive, web-based tools that facilitate data access and analysis. Also, to address the increasing need for natural heritage data that spans state boundaries, we strongly recommend the development of a unified multi-state dataset, in partnership with the Association for Biodiversity Information (ABI), which represents the natural heritage network. Several heritage programs in the Rocky Mountain region have also partnered to begin developing direct web-access to integrated heritage data through a flexible, distributed database model. We urge EPA and other partners to work with and assist the heritage network in achieving these goals of expanded and more efficient data access, rather than assembling data on a watershed by watershed basis.

Acknowledgements

This project was funded with the generous support of the United States Environmental Protection Agency (EPA) Region VIII Ecosystem Protection Grant and Regional Geographic Initiative to The Nature Conservancy's Western Regional Office, the Montana Natural Heritage Program and the Wyoming Natural Diversity Database. These grants provided support to improve the quality and quantity of important biological information in the Upper Yellowstone Watershed. The contents of this document do not necessarily reflect the views and policies of the EPA, nor does mention of trade names or commercial products constitute endorsement or recommendation for use. We extend special thanks to Tom Johnson of EPA for his patient support throughout the duration of this project and to Joyce K. Brame, EPA Grants Specialist.

The Montana Natural Heritage Program produced this report. Data records presented in this report represent contributions from many individuals who have worked in the watershed over the last century and deserve a special thanks and recognition. For this project, several individuals added new or updated species and community occurrence information in the watershed; these people include Marc Jones, Peter Lesica, and Jack Greenlee. The credibility of heritage data is founded on a strong science staff. Thanks to botanists Bonnie Heidel

and Walt Fertig, zoologists Paul Hendricks and Gary Beauvais and ecologists Marc Jones and George Jones for their contribution to this project. This project received substantial support from heritage staff: Pete Feigley helped develop the first iteration of heritage sites in Montana. Cedron Jones migrated the mapped information into a Geographic Information System (GIS), making the delivery of this information possible. Joy Lewis helped with editing and publishing. Martin Miller processed the element occurrence and site basic records. Terrie Kenney helped with data entry and storage, file organization and report formatting. Laura Welp and Rebekah Smith provided element occurrence and site basic records from the Wyoming Natural Diversity Database.

Thank you to Katrina Scheuerman, (NRIS) for her help in formatting and production and to Jim Dushin for his original watercolor of Emigrant Peak, Yellowstone River. A huge thank you to Melony Bruhn, MTNHP contract and grants administrator for the terrific job keeping the project financial and accounting records. Melony has demonstrated patience and fortitude beyond the call of duty.

We are also grateful for the kindness of landowners and state land lessee who gave us permission to access private property or to gain access to state lands in the watershed.